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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/591,539

11/15/2007

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EXAMINER

GALT, CASSI J

ART UNIT

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/591,539	Applicant(s) YOSHIDA ET AL.	
	Examiner CASSI GALT	Art Unit 3662	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 July 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10, 12, 13, 15-19 and 21-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10, 12, 13, 15-19 and 21-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>7/8/2009</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. The finality of the office action mailed 3/13/2009 is withdrawn.

Information Disclosure Statement

2. The information disclosure statement (IDS) submitted on 7/8/2009 was filed after the mailing date of the final office action on 3/13/2009. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-3, 8, 9, 15, 17, 21, and 22 are rejected under 35 U.S.C. 102(b) as being anticipated by Kasevich (US 5,223,849).

Regarding claims 1 and 21, Kasevich teaches an electromagnetic wave absorber comprising: an element receiving layer (D1 and/or D2, Figs. 2 and 8) provided with a

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first type (50, Fig. 16) and second type (52, Fig. 16) of conductor elements having resonant frequencies (5:25-31), where Fig. 16 shows that each of the element receiving layer conductor elements is disposed on a surface of the element receiving layer on a side from an incoming direction of electromagnetic waves, spaced away from each other, the conductor elements being substantially polygonal and having arc-shaped corners. Kasevich also teaches a loss material layer (L1, L2, L3, Fig. 2, or 17, Fig. 8).

Regarding claims 2 and 22, Kasevich teaches that the conductor elements are arranged in layers (D1 and/or D2, Figs. 2 and 8) in the incoming direction of electromagnetic waves.

Regarding claims 3 and 15, Kasevich teaches an electromagnetic wave reflecting means (10, Figs. 2 and 88) disposed on a side opposite to a side from which electromagnetic waves are incident.

Regarding claims 8 and 17, Kasevich's Fig. 16 shows that conductor elements may be shaped like crosses and quadrangles (50, 52, Fig. 16), that the cross and quadrangular conductor elements are arranged in a direction intersecting the incoming direction of electromagnetic waves, that the cross conductor elements are arranged in a regular manner, and that the quadrangular conductor elements are arranged so as to fill in the areas surrounded by the cross conductor elements.

Regarding claim 9, Kasevich's Fig. 16 shows that cross conductor elements are arranged such that radially extending portions are faced with each other, and that the quadrangular elements are square shaped, as are the areas surrounded by the cross conductor elements.

Claim Rejections - 35 USC § 103

5. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

6. Claims 1, 3-7, 10, 12, 13, 15, 16, 18, 19, and 21, 23, and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kondoh (US 6,337,661) in view of Matsuo (JP 11-204984).

Regarding claims 1, 21, and 24, Kondoh teaches an electromagnetic wave absorber comprising: an element receiving layer (16, Fig. 11) provided with a first type (6-1, Fig. 12) and second type (6-2, Fig. 12) of conductor elements having resonant frequencies (7:49-54), where Figs. 11 and 12 show that each of the element receiving layer conductor elements is disposed on a surface of the element receiving layer on a side from an incoming direction of electromagnetic waves, spaced away from each other, the conductor elements being substantially polygonal. Kondoh also teaches a loss material layer (15, Fig. 11).

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Kondoh does not teach that the plurality of conductor elements have one or more arc shape corners, or that all corners are arc-shaped. However, electromagnetic wave absorber conductor elements having arc shaped corners are well known. For example, Matsuo teaches an electromagnetic wave absorber using conductor elements having arc shaped corners (Figs. 4 and 8). Matsuo teaches that the arc shaped corners of Figs. 4 and 8 result in different absorption properties than the square corners of Fig. 3 (see Tables 1-5). It would have been obvious to modify Kondoh by shaping one or more or even all of the corner portions of the conductor elements in an arc shape in order to attain different absorption properties.

Regarding claims 3 and 15, Kondoh teaches an electromagnetic wave reflecting means (metallic lid 5, Fig. 11) disposed on a side opposite to a side from which electromagnetic waves are incident.

Regarding claims 4-7, 10, 12, 13, 16, 18, and 19, the claims features are well known. It would have been obvious to further modify Kondoh with said features because they are merely what one would expect to find in an electromagnetic wave absorber.

Regarding claim 23, Kondoh teaches a third type of conductor element (6-3, Fig. 12) spaced away from first and second types of conductor elements, 6-1 and 6-2.

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7. Claims 2 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kondoh (US 6,337,661) in view of Matsuo (JP 11-204984) and further in view of Lind (US 6,225,939) or Kasevich (US 5,223,849).

Regarding claims 2 and 22, Kondoh does not teach that the conductor elements are also arranged in the incoming direction of electromagnetic waves. However, Lind teaches an electromagnetic wave absorber comprising conductor elements arranged in layers in the incoming direction of electromagnetic waves (22, Figs. 1 and 3). Lind teaches that arranging conductor elements in layers is a means for controlling the transmission, reflection, and/or absorption properties of a material (abstract, 1:5-10). Kasevich also teaches an absorber comprising conductor elements arranged in layers (D1, D2, Figs. 2 and 8) for the purpose of absorbing different frequencies (5:25-31). It would have been obvious to further modify Kondoh by arranging conductor elements in the incoming direction of electromagnetic waves because it is a known way to achieve desired absorption properties the could be used with no new or unexpected results.

8. Claims 4-7, 10, 12, 13, 16, 18, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kasevich (US 5,223,849).

Regarding claims 4-7, 10, 12, 13, 16, 18, and 19, the claims features are well known. It would have been obvious to further modify Kasevich with said features

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because they are merely what one would expect to find in an electromagnetic wave absorber.

Response to Arguments

9. Applicant's arguments with respect to claims 1-10, 12, 13, 15-19, and 21-24 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CASSI GALT whose telephone number is (571)270-1469. The examiner can normally be reached on Mon-Fri 7:30AM-5:00PM, Alt. Fri, Eastern Time.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Tarcza can be reached on 571-272-6979. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/C. G./

Examiner, Art Unit 3662

/Thomas H. Tarcza/

Supervisory Patent Examiner, Art Unit 3662